Aluminum Adjuvants Used in Some COVID Vaccines May Increase Risk of Serious Respiratory Disease

A COVID-19 vaccine ingredient may be effective against a single tempered virus strain but could raise the risk of serious respiratory illness after exposure to new virus strains, according to a preprint study.

By Angela DePalma, Ph.D.

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Alum, an aluminum-based adjuvant or immune enhancer used in many vaccines — including inactivated virus COVID-19 vaccines — helps protect against the targeted (homologous) virus strain.

However, alum may raise infection risk from new heterologous virus strains, referred to as "breakthrough" infections, according to a preprint study published on Research Square.

Of the 13 billion COVID-19 vaccine doses administered globally, 5 billion used inactivated coronavirus as their active ingredient, including those from Sinopharm, Sinovac and Bharat's COVID-19 vaccine Covaxin, which was deployed in 40 countries, and the Indian COVAXIN.

Examples of virus-inactivated COVID-19 vaccines include China's CoronaVac product, which was distributed in 40 countries, and the Indian COVAXIN vaccine.

Alum also increases the risk for vaccine-associated enhanced respiratory disease (VAERD), a potentially life-threatening complication, after infection with a new strain. However, this effect disappears when alum is replaced by a different adjuvant, according to the study.

The team used a mouse model specifically for susceptibility to coronavirus-induced lung disease.

The alum-containing vaccine protected against homologous (i.e., same virus) challenges with no apparent ill effects.

But when the mice were exposed to a coronavirus that the vaccine was not designed to protect against, they developed classic symptoms of VAERD. The symptoms included severe pneumonia and elevated eosinophil-mediated lung function.

This effect, which persisted for at least 10 months, appears to be related to the adjuvant because when alum was replaced with R848 — an unapproved, research-only adjuvant — mice cleared the virus faster and did not develop VAERD.

Alum's effect on VAERD was partially reduced by re-immunizing the animals with a R84-based adjuvant vaccine.

Ribi adjuvants are emulsions of salt water, a detergent, two bacterial products and the approved adjuvant squalene. Ribi interacts with immune cells to enhance the release of cytokines (immune molecules) and antigen-processing.

RFK Jr. and Brian Hooker's new Book: "Vax-Unvax"

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Researchers exposed vaccinated mice to two different virus strains

Research by Mark Heise, Ph.D., an immunologist at the University of North Carolina, used laboratory mice to compare the effectiveness of an inactivated, alum-containing SARS-CoV-2 vaccine (ICOVS) against two coronaviruses: the strain on which the vaccine was designed, known as the homologous strain, and a heterologous strain of SARS-CoV-2 (hetCoV2) pneumonia virus.

The test animals were bred specifically for susceptibility to coronavirus-induced lung disease.

The alum-containing vaccine protected against homologous (i.e., same virus) challenges with no apparent ill effects.

But when the mice were exposed to a coronavirus that the vaccine was not designed to protect against, they developed classic symptoms of VAERD. The symptoms included severe pneumonia and elevated eosinophil-mediated lung function.

This effect, which persisted for at least 10 months, appears to be related to the adjuvant because when alum was replaced with R84 — an unapproved, research-only adjuvant — mice cleared the virus faster and did not develop VAERD.

Alum's effect on VAERD was partially reduced by re-immunizing the animals with a R84-based adjuvant vaccine.

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COVID vaccine-induced VAERS detected by summer 2020

VAERD is a type of vaccine-associated enhanced disease (VAED) that affects the lower respiratory tract, primarily the lungs. The letter "E" in VAERD and VAED refers to "enhanced" — or atypical cases of a viral disease after vaccination against it.

A 2021 analysis recognized VAED as "a serious barrier to attaining successful virus vaccines."

Post-vaccination VAERD and related "enhancements" of both infection and respiratory complications have been known since at least the 1960s. Heise cited three examples from prior vaccination campaigns.

In one example, large numbers of breakthrough pediatric measles cases occurred years after vaccination. These were "atypical" in that the children had all measles symptoms, including rash, but the measles virus could not be isolated from them.

In the second example, infants who received the respiratory syncytial virus (RSV) vaccine were later infected by RSV and developed VAERD. Both of these studies were from the 1960s.

The third case, from 2020, involved severe dengue disease outbreaks in dengue-vaccinated children who had previously taken a dengue vaccine.

COVID-19 vaccination-induced VAEDS was already recognized as a complication by the summer of 2020, while the vaccines were still under evaluation. However, a later paper claimed the immunologic changes signifying VAERD were "associated with antiviral protection rather than immunopathology" following mRNA-based vaccination.

That is because mRNA COVID-19 vaccines do not use conventional adjuvants. Instead, they rely on "self-adjuvanting" from the included genes, their protein expression products or the delivery components (e.g., lipids or fats that carry mRNA into cells).

The immunogenicity of Pfizer's BNT162b2 mRNA COVID-19 vaccine, for example, results from immune recognition of modified mRNA, the adjuvant properties of lipid nanoparticles and mostly unidentified gene and protein products left over from the vaccine manufacturing process.

Aluminum associated with many ill effects

Adjuvants are chemical irritants that prime the immune system to respond strongly and durably to antigens in vaccines.

Compared with "unadjuvanted" vaccines, vaccines containing an adjuvant are more powerful because they require fewer doses, create more rapid immune responses, protect against more antigens and variants, recruit a broader array of immune responses and induce memory responses that last longer than responses.

Although early vaccines — for example, a rabies product used since 1885 and a typhoid vaccine introduced in 1911 — contained irritants that functioned as adjuvants, the formal use of adjuvants as additives did not begin until the 1920s.

Alum, an aluminum-based adjuvant discovered in 1926, has been a mainstay ingredient in vaccines for a century.

Live-attenuated vaccines, such as rotavirus, smallpox and chickenpox, and inactivated-virus vaccines, such as hepatitis A, flu and polio, contain whole viruses, virus fragments and other unadjuvanted substances that act as adjuvants.

However, the inactivated-virus COVID-19 vaccines use highly purified antigens so they require extra help to be effective.

That is why alum adjuvants are used in vaccines like hepatitis A, hepatitis B, diphtheria, tetanus, Haemophilus influenzae and pneumococcal vaccines, which are live viral vaccines, such as measles, mumps, rubella, varicella and rotavirus.

Aluminum, the main ingredient in alum, is associated with many ill effects including injection site inflammation, endocrine disruption and damage to the digested, cardiovascular and pulmonary systems.

No discussion of the aluminum-containing vaccines

Although mouse study results often do not apply to humans, the authors noted the clinical and immunologic similarities between vaccine-induced flaws in the mice and VAERD in people.

Both involve type 2 inflammation and the infiltration of immune system cells into the lungs.

Heise's mouse model was engineered for susceptibility to strong type 2 inflammatory responses, which likely increased their reported immune effects. Mouse models are standard in studies on cancer, HIV infection heart failure and other conditions.

Heise et al. reported that similar vaccine-induced conditions occur in other species and in mice not specifically bred to develop VAERD. Moreover many humans, though either genetics or coronavirus exposure, have developed similar susceptibility.

Because vaccine-induced VAERD occurs after infection with a previously unencountered virus the authors were concerned with novel variants crossing from wild animals to humans, specifically mentioning bats, deer, mink and the "re-emergence of existing SARS-CoV-2 variants from zoonotic [wild animal] reservoirs."

Yet no evidence links wild animals to COVID-19-causing coronaviruses in the first place.

Because Heise's study was undertaken to explore connections between alum and VAERD, the absence of any discussion of the aluminum-containing vaccines was surprising. One might assume that each real or dose contains the same quantities of aluminum but the actual amounts vary by vaccine manufacturer.

A 2021 study on the aluminum content of 13 common childhood vaccines found that only three contained quantities of alum indicated by the manufacturer. Six had (statistically significantly more alum and four had less.

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Angela DePalma, Ph.D.
Angela DePalma, Ph.D., is a science reporter/editor for The Defender.

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sherry73 — 1 hour ago
The bottom line is there shouldn't be any aluminum in any vaccine! Did you ever wonder why so many people have Alzheimer's? Maybe it's because they've been burdening their bodies with aluminum for years. The aluminum overwhelms the body's immune system and causes some vaccines to help the body build stronger immunity against the germ or virus in the vaccine. Aluminum is a neurotoxicant which contributes to cognitive dysfunction which contributes to Alzheimer's disease. Aluminum can enter and be deposited into the brain from either systemic circulation or the site of absorption. I think I'll pass on any future vaccines containing aluminum.
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jason5 — sherry73 — 1 hour ago
Dr. Suzanne Humphries. You can detox from these metals and not just once and do. I know my super intelligent father has had this happen. Dementia & Parkinsons also to name a few.
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Alexi — sherry73 — 1 hour ago
Maybe there shouldn't be any vaccines, period.
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Hanne Kopke — sherry73 — 1 hour ago
Aluminum is not small amounts of aluminum that are added to some vaccines to help the body build stronger immunity against the germ or virus in the vaccine. [quote]: "From these animal studies, a tolerable weekly intake (TWI) of aluminum in humans has been defined by the European Food Safety Authority (EFSA): 1 mg Al/kg bw/week.
Assuming 100% bioavailability of ingested aluminium is low, with approximately 0.1% being absorbed from water and 0.1% from food" [end of quote]. This means that 0.3 mg aluminium, as the amount of aluminium in the Gardasil 9 vaccine, is the equivalent of drinking 300 mg fluoridated water every hour for 168 hours. The vaccine's tolerable weekly intake as been defined by the European Food Safety Authority (EFSA): 1 mg Al/kg bw/week.
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Greg — sherry73 — 1 hour ago
Also to mention the aluminum antiperspirants we've been slathering on ourselves all these years, or the aluminum pots and pans we've been cooking in for at least 2 generations.
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sherry73 — Greg — 1 hour ago
I stopped using anti-perspirants almost two years ago. I use organic coconut oil. It works better and longer, and is safer.
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Teddy 0150 — 1 hour ago
Those responsible for injecting millions with these damaging vaccines will be held accountable... by Almighty God.
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hollyroquel — 1 hour ago
Anyone who is privately educated would never take any jab. I won't even drink any municipal water as it is apparent that they are trying to eliminate as many people as they can.
Reply • Share

Jason5 — hollyroquel — 1 hour ago
Agreed. And don't fall for it's a restaurant, they have to filter their water! I got sucked in at the Mc Kors Milwaukee water. You never forget that experience! :)
Reply • Share

Rick SP — 1 hour ago
Aluminum can accumulate directly into your bloodstream. Sounds like a great idea, sign me on then.! Polysorbate are chemical irritants that prime the immune system to respond strongly and durably to antigens in vaccines." Sounds like they need to be that educated to question the entire concept of directly injecting any type of "chemical irritant" into your body!
Reply • Share

Tanzila — 1 hour ago
Apparently common sense has escaped most of the population because even those awakening to the scam still go ahead having their kids get their "shots" sticks.
Our bodies "used to a foreign invader [bug/virus]" will learn to fight off the invaders. They are not our 'friends' to develop immunity [from any injected invader].
This includes allergy shots. Unbeknownst to me, I was getting a weekly allergy shots to 'help' my reactions to a number of things. One day it hit me that I was actually creating more immunity issues because of the adjuvants in those shots. What an idiot I was. It's been 10 plus years of building up my immunity to a healthy level.
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Hanne Kopke — Tanzila — 1 hour ago · edited
ALK [SQ] Dermatophagoides pteronyssinus injection preparation against dust mites allergy contains Aluminumhydroxid (Aluhydrat SQ).
Reply • Share

Elliot — 1 hour ago
Hey, lets make a crappy vaccine that does next to nothing as far as preventing illness and add a bunch of toxic ingredients and then get millions of parents to inject it into their children on a second thought. Accomplished over the last 5 decades.
Reply • Share

Hanne Kopke — 1 hour ago
Some COVID vaccines often contains aluminium adjuvant.
Please note what prof. Peter Kaby and Prof. Stabell Benn writes about inactivated vaccines, it seems like these vaccines have a negative impact on the immunosystem.
https://pubmed.ncbi.nlm.nih.gov
https://vaccinesmyths.dk/en/s...
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Hanne Kopke — 1 hour ago
Please note this.
https://www.thelancet.com/journal...
[quote]: "The FDA analysis indicates that the body burden of aluminium following injections of aluminium-containing vaccines never exceeds safe US regulatory thresholds based on orally ingested aluminium even for low birth-weight infants" [end of quote].
https://www.vaccinesafety.edu/adj-Alum.htm
[quote]: "From these animal studies, a tolerable weekly intake (TWI) of aluminium in humans has been defined by the European Food Safety Authority (EFSA): 1 mg Al/kg bw/week...
The overall bioavailability of ingested aluminium is low, with approximately 0.3% being

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